



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/965,613	09/27/2001	Shingo Hamaguchi	1109.65875	8145

7590

03/10/2004

Patrick G. Burns
GREER, BURNS & CRAIN, LTD.
Suite 2500
300 South Wacker Dr.
Chicago, IL 60606

EXAMINER

NEGRON, DANIEL L

ART UNIT

PAPER NUMBER

2651

DATE MAILED: 03/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/965,613

Applicant(s)

HAMAGUCHI, SHINGO

Examiner

Daniell L. Negrón

Art Unit

2651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 13-15 is/are rejected.
- 7) ☒ Claim(s) 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Elly et al U.S. Patent No. 4,928,194

Regarding claim 1, Elly et al discloses a disk cartridge comprising a data storage disk (12) including a recording portion and a non-recording portion (see Fig. 1).

Elly et al also discloses a disk cartridge comprising a casing (14) including an inner space for accommodating the disk, the casing including an inner surface facing the disk (see Fig. 1), and an anti-static layer (32) provided on the inner surface of the casing (14) for eliminating static electricity generated on the disk (column 3, lines 10-14).

Finally, Elly et al discloses a disk cartridge comprising an elastic member (19) provided on the inner surface of the casing (14) (see Fig. 1).

Art Unit: 2651

Regarding claim 2, Elly et al discloses a disk cartridge wherein the casing is formed with an opening (22) communicating with the inner space, the anti-static layer (32) being formed in a disk facing region on the inner surface and avoiding the opening the elastic member (19) being brought into contact with the non-recording portion (column 2, line 61 through column 3, line 9).

Regarding claim 5, Elly et al discloses a disk cartridge comprising a conductive member provided on an external surface of the casing (14), the conductive member being connected to the anti-static layer (column 3, lines 15-19).

3. Claims 6-8, 10, 11, and 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Ogura Granted Japanese Patent Heisei No. 6-48590.

Regarding claims 6 and 15, Ogura discloses a disk apparatus for managing data with respect to a disk cartridge including a data storage disk (2), a hub (2a) attached to the disk, a casing (3,4) for accommodating the disk (2), an anti-static layer (6) for eliminating static electricity generated on the disk (2), and an elastic member (31) provided on the casing (3,4).

Ogura also discloses a disk apparatus for managing data with respect to a disk cartridge comprising a disk drive into which the disk cartridge is inserted (see Fig. 4).

Ogura also discloses a disk apparatus for managing data with respect to a disk cartridge comprising a rotatable holder (16) disposed opposite to the anti-static layer (6) with respect to the disk that is detachably fixed to the hub of the disk and rotates the disk (see Figs 1, 4, and page 11, 5th and 6th paragraphs).

Ogura also discloses a disk apparatus for managing data with respect to a disk cartridge comprising an actuator that causes the holder (16) and the casing (3,4) to approach and recede from each other and a controller that manages the holder and the actuator. Furthermore however

Art Unit: 2651

not shown by Ogura, the actuator and controller are considered inherent since these components are necessary to load/unload the disk cartridge to/from the disk drive in preparation for recording, reproducing or static removal.

Regarding claims 7 and 10, Ogura discloses a disk apparatus wherein the controller causes the actuator to move the holder (16) to a rotatable position and at an angle where the disk (2) and the anti-static layer (6) are spaced enough to allow the disk to rotate freely and all the recording area of the disk is discharged (page 13, 5th-7th paragraphs). Furthermore, the anti-static member is only press into contact with the disk when the disk is not rotating or when being stopped, therefore otherwise the disk is allowed to rotate freely within the cartridge (see Fig. 1).

Regarding claim 8, Ogura discloses a disk apparatus wherein the controller causes the actuator to move the holder to an eject position where the disk cartridge is ejectable from the disk drive (page 10, 4th and 5th paragraphs).

Regarding claim 11, Ogura discloses a disk apparatus wherein the elastic member (31) is brought into contact with the disk when the disk is rotating at a rate lower than a predetermined threshold (page 13, 6th-7th paragraphs). Furthermore Ogura teaches that when the disk is to be stopped, the elastic member is used to brake the disk thereby lowering the normal rotation speed of the disk.

Regarding claims 13 and 14, Ogura discloses a disk apparatus wherein the controller causes the actuator to move the holder for bringing the disk into contact with the anti-static layer when the disk is inserted into the disk drive and furthermore when the disk is about to be ejected from the disk drive (page 11, 5th paragraph through page 12, 5th paragraph and page 12, 7th paragraph through page 13, 6th paragraph).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elly et al U.S. Patent No. 4,928,194 in view of Ogura Granted Japanese Patent Heisei No. 6-48590.

Regarding claims 3 and 4, Elly et al discloses a disk cartridge comprising a shutter (24) and a hub (16) provided with a magnetic member, the shutter being slidable on the casing (14) between a close position and an open position for selectively closing the opening of the casing (14) and furthermore the hub (16) being attached to the center of the disk (12) (see Fig. 1). However, Elly et al fails to show the hub coming into contact with the shutter in the close position so that the disk is spaced from the anti-static layer.

Ogura however, discloses a disk cartridge and disk drive wherein the shutter is formed so as to contact the hub in the close position (see Fig. 1). The disk drive disclosed by Ogura is configured to allow the disk to contact an inner anti-static layer when the shutter is in the open position maintaining the disk spaced from the anti-static layer in the close position (page 8, 2nd paragraph).

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the disk cartridge disclosed by Elly et al with the disk cartridge and drive as taught by Ogura in order to provide a disk drive with the capability of

Art Unit: 2651

removing static electricity and dust from the surface of a disk and thereby providing effective recording/reproduction of data.

6. Claim 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogura Granted Japanese Patent Heisei No. 6-48590 in view of Rudi et al U.S. Patent No. 5,475,548.

Regarding claim 9, Ogura discloses a disk apparatus with all the limitations of claim 6 as discussed above, but fails to show the disk drive provided with a ground terminal held at a ground potential coming into contact with a conductive member provided on the disk cartridge when the cartridge is inserted into the drive.

Rudi et al however discloses a drive for a magnetic tape cartridge wherein a ground terminal is provided for the purpose of discharging static electricity from the cartridge upon insertion into the drive (see Fig. 4 and column 6, lines 18-49).

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the disk apparatus disclosed by Ogura with the static electricity grounding as taught by Rudi et al in order to obtain a disk drive which rapidly controls electrostatic discharges between the disk cartridge and disk drive and further to provide isolation of the cartridge to all metal surroundings of the disk drive.

Allowable Subject Matter

7. Claim 12 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2651

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Voldman U.S. Patent No. 6,574,078 is cited as of interest for disclosure of an electro-static protection device with a manual on/off switch.

Kimura et al U.S. Patent No. 6,594,110 is cited as of interest for disclosure of the structure of an electro-static protection device in a disk drive.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniell L. Negrón whose telephone number is 703-305-6985. The examiner can normally be reached on Monday-Friday (8:30-6:00) Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Hudspeth can be reached on 703-308-4825. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DLN 
March 4, 2004


DAVID HUDSPETH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600